CARBON FREE POWER PROJECT
DEVELOPMENT STATUS AND OVERVIEW
JULY 15, 2020

Introduction

In anticipation of a decision by your community on continuing participation in the Carbon Free Power Project and your utility's participation in the Town Hall meeting next Tuesday the following overview of the Carbon Free Power Project is provided.

History

In pursuit of providing energy certainty in a carbon regulated era which is on the horizon, UAMPS undertook investigations of:

1. Replacement of existing carbon fired generation with non-carbon sources,
2. Reducing capacity and energy usage through efficiency programs,
3. Providing for future load growth needs, and
4. While assuring economical cost stability with high reliability and resiliency.

These investigations resulted in the establishment of the Carbon Free Power Project (CFPP), initially consisting of energy efficiency measures, pursuit of non-dispatchable renewable resources and carbon free dispatchable resources. ("Dispatchable resources" means the power that is available 24/7, 365 days a year.)

Over time UAMPS developed a separate energy efficiency program and segregated non-dispatchable renewable resources into stand-alone projects. The investigation of options for carbon free dispatchable resources resulted in looking to nuclear powered generation. In particular, Small Modular Reactors (SMRs) were selected based upon their ability to be scaled to appropriate capacity amounts, ability to follow load, safety aspects and competitive economics. When compared to large conventional reactors which provide in excess of 1,000 megawatts of capacity, present a range of construction challenges, operate at high plant factors (i.e., base load operations), are complex to operate and require enormous levels of capital, SMRs were superior in meeting the needs of UAMPS.

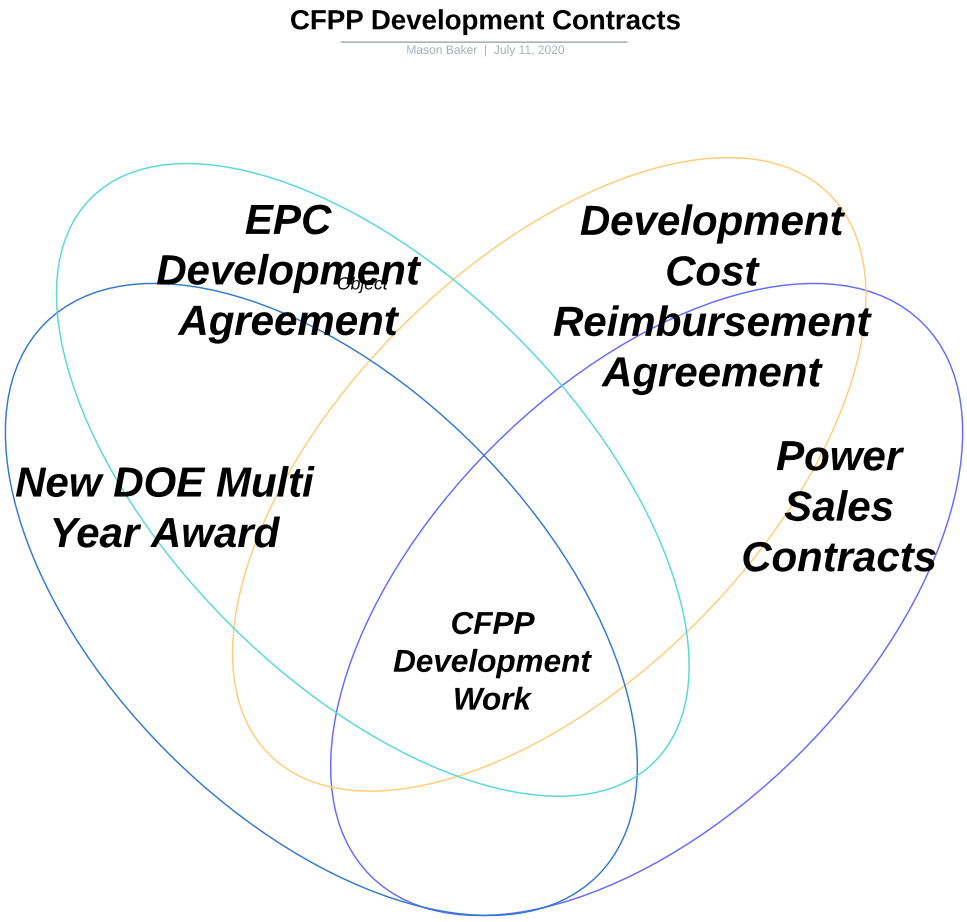
The Carbon Free Power Project (CFPP) consists of the deployment of, in a single reactor building, up to 12 Nuclear Power Modules (NPMs), that will be manufactured and assembled in a factory setting, transported to the Idaho National Laboratory (INL) and installed as an integral component. The NPMs operate independently, each producing steam to generate 60 megawatts, for a total plant capacity of 720 megawatts gross.

The CFPP will be interconnected to the PacifiCorp Antelope Substation with initial generation slated for 2029. The 40-year levelized cost of energy (LOC) target is set at $55 per megawatt-hour (MWH) delivered at the Antelope Substation, in 2018 dollars (or $69/MWh in 2029 dollars).

Contracts

There are numerous contracts associated with the CFPP but four major contracts drive the development of this project:

1. The Power Sales Contract between UAMPS and each of the Participants,
2. The New U.S. Department of Energy (DOE) Multi-Year Award between UAMPS and the DOE,
3. The Development Cost Reimbursement Agreement between UAMPS and NuScale, and
4. The Engineering, Procurement and Construction (EPC) Development Agreement between UAMPS and Fluor Corporation.



Power Sales Contract

The Power Sales Contract (PSC) provides the duties and obligations of both UAMPS and the Participants. The PSC is based upon the standard take-or-pay, power sales contracts used for UAMPS other generating projects, with a number of modifications specific to the CFPP. The modifications were made in close collaboration with the CFPP Project Management Committee and with a Legal Committee comprised of attorneys representing a number of the Participants. The Legal Committee met throughout 2016 and 2017 and recommended the PSC to the Project Management Committee on December 17, 2017. At that point in time, UAMPS had only conceptualized the CFPP, and the knowledge and modeling needed to assess its risks and benefits were still being developed.

This required the Legal Committee to not only understand the basis for project contracts to provide flexibility for further CFPP development work, but to also have a working knowledge of

nuclear technology, the Nuclear Regulatory Commission licensing process and UAMPS' development plans. The first set of meetings of the Legal Committee provided these discussions. UAMPS Bond Counsel, Chapman and Cutler, provided several drafts of the PSC to the Legal Committee that included a range of modifications to better enable the Participants to control their exposure to the risks associated with the CFPP. These modifications included a phased approach to the development of the CFPP (601), Participant off-ramps (Section 204), restrictions on costs (Section 601), adoption of a Price Target for energy output (Section 601) and approval points to proceed including having to go back to the Participants' governing bodies for approval before starting construction (Sections 502 & 505).

New DOE Multi-Year Award

The U.S. DOE has been supportive of the CFPP since its inception. As UAMPS' understanding of the project sharpened so did DOE's. This has resulted in the DOE agreeing to provide UAMPS with a New DOE Multi-Year Award in the nominal amount of $1.4 billion representing approximately 25% of the estimated Development and Construction Costs of the CFPP, spread over a period of nine years, concluding with commercial operation of the CFPP. Of special significance is the front-ended load distribution of DOE's cost-sharing payments. DOE has agreed to pay approximately 80% of UAMPS' Development Work Costs until we get to an advanced cost estimate for the CFPP, the Class III Project Cost Estimate. The New DOE Multi-Year Award also reduces the amounts UAMPS will need to finance over the next few years, thus reducing the Levelized Cost of Energy (LCOE) of the Project. In sum, the New DOE Multi-Year Award provides a significant support that allows UAMPS to proceed forward with derisking the CFPP with less exposure to the Participants during the early development phases of the Project. It is anticipated the New DOE Multi-Year Award will be finalized in early September and is one of the four conditions precedent prior to the Revised Budget and Plan of Finance becoming effective.

The Joint Use Module Project (also known as JUMP) was originally set up to provide support for the CFPP through participation by DOE/INL in one of the NPMs. The concept was that funds would be specifically directed to the first NPM at the CFPP as well as one-twelfth of the Balance of Plant. DOE would then lease NPM1 for research purposes from UAMPS for a minimum of 15 years with a maximum of 30 years. Thirty-four of the thirty-five Participants elected to pursue this low-cost future capacity option. After vetting the cost of the research projects envisioned to be performed with JUMP, DOE and Congressional appropriations staff elected not to fund the research projects, thus negating the need for a lease. Instead, the amount requested by UAMPS for JUMP has been reallocated as part of the New DOE Multi-Year Award. UAMPS is providing a reduced cost for NPM1 to the existing JUMP Participants and if not acceptable to them then to the other Participants in the CFPP. Should the existing JUMP Participants accept this proposal, then their cost associated with output from NPM1 is estimated at approximately $39/MWh.

Development Cost Reimbursement Agreement

The Development Cost Reimbursement Agreement (DCRA) provides for NuScale and UAMPS to manage and de-risk the development of the CFPP. The DCRA provides for NuScale cost share contributions, NuScale reimbursement conditions, the $55/MWH Price Target, a schedule of budgeted cash flows, budgeted revenue support from DOE, NuScale and UAMPS, a milestone schedule and the Economic Competitive Test (ECT) model (described below). More specifically, running of the ECT serves as an objective measure that the cost to construct, operate, and decommission the CFPP is at or below the Price Target of $55/MWh in 2018$.

Engineering, Procurement and Construction Development Agreement

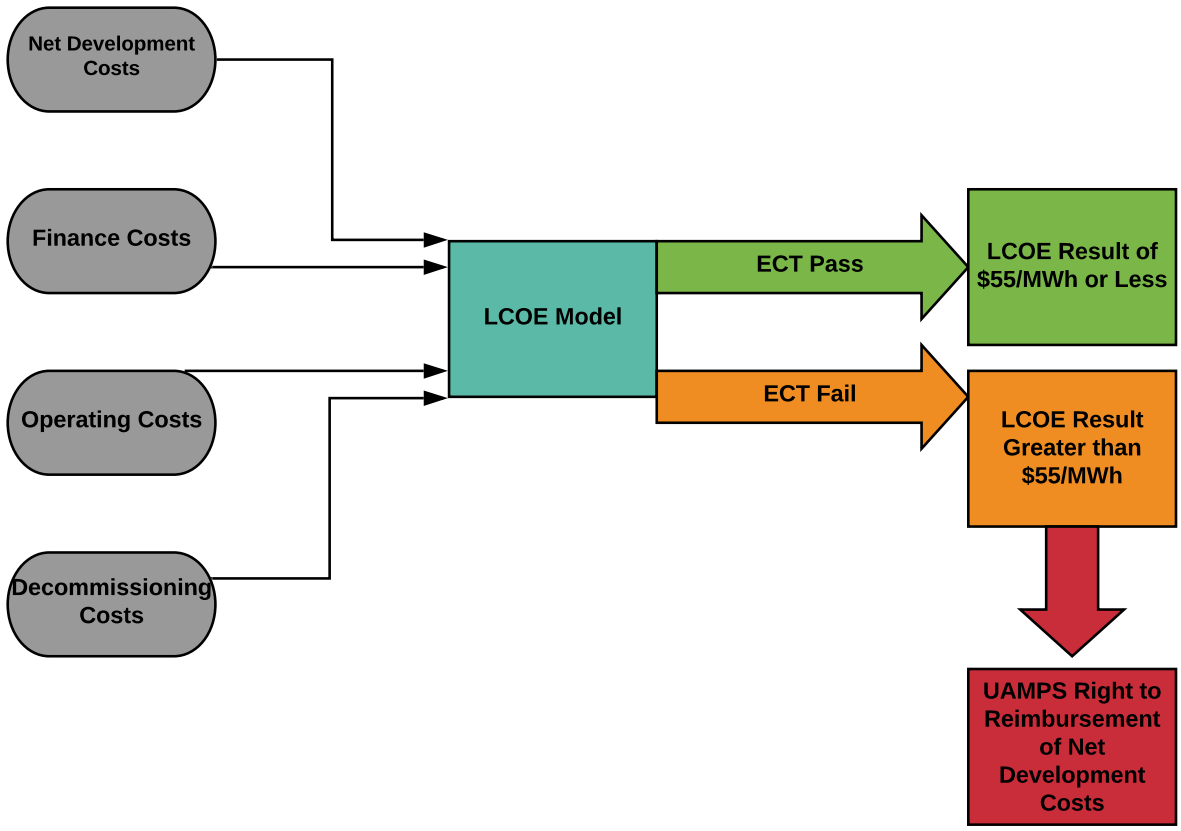
The Engineering, Procurement and Construction Development Agreement (EPC DA) establishes the plan for Fluor to develop the site specific engineering and associated cost estimates for deployment of the NuScale technology at the INL site.

How the Power Sales Contract, the New DOE Multi-Year Award, the Development Cost Reimbursement Agreement and the Engineering, Procurement and Construction Development Agreement work together

The cost to deploy the CFPP for the Participants (net of DOE and NuScale cost share) is estimated at approximately $4.8 billion. With a conventional generating facility, UAMPS would typically finance the construction upon execution of a development and construction contract. However, the CFPP is a “first of a kind” nuclear technology configuration and UAMPS and the Participants cannot and should not shoulder the CFPP development risk by themselves. Given the terms of the PSC, UAMPS proposed the New DOE Multi-Year Award , DCRA, and EPC DA commercial structures to prudently de-risk the project without exposing the Participants to unreasonable cost exposure.

In summary, the EPC DA provides for the development of site-specific engineering estimates of total project construction costs. These total project cost estimates are then combined with UAMPS’ development and financing costs. The New DOE Multi-Year Award and the NuScale Cost Contributions are then deducted from these costs to provide a net development cost to UAMPS. This net cost is then combined with the estimated fuel, operating and decommissioning costs of the CFPP and inputted into the LCOE model described in the DCRA to run the ECT. The result of the LCOE model is a dollar per megawatt-hour value which is compared to $55/ MWH Price Target—this process is what is referred to as “running the ECT”. If an ECT run results in a LCOE greater than $55/MWh, then UAMPS has an option to cancel the CFPP and receive reimbursement for a portion, depending where the failure occurs in the development schedule, of its net development costs. The last run of the ECT is anticipated to occur immediately before

final notice to proceed to construction is given to Fluor under the EPC Agreement. The below figure illustrates how the ECT process operates, utilizing the LCOE model, and the potential ECT outcomes.



Resource Option Analysis

Forecasting the price of electricity in the future is very difficult given all of the variables that go into such a forecast, but there are a few ways to get around this dilemma. UAMPS evaluated alternatives using the status quo as the assumption for the cost of compliance as to greenhouse gas regulation, that is, there are no compliance costs associated with emitting greenhouse gases. As coal plants in the current portfolio retire, a rational replacement power supply costs would be natural gas fired generation. The least cost method of burning natural gas for electric generation is a natural gas combined cycle gas plant. A natural gas combined cycle gas fired generation resource would provide dispatchable capacity to help integrate additional variable energy sources like solar generation. Using current data for construction costs and today's natural gas prices from a variety of sources, a Levelized Cost of Energy (average cost over life of financing) of $55/MWh, at a bus bar and in 2018 dollars was established as the cost of UAMPS' alternative.

Analysis

The question of stranded investment is critically important when considering investment into new generation. UAMPS is not concerned about stranded investments in the coal resources in its portfolio given that these resources are all scheduled to be retired by 2030. Two questions need to be considered.

First, we must consider whether a fossil fuel-fired generating facility constructed today will be available for generation 30 years in the future? This uncertainty is due to the potential for some sort of greenhouse gas regulation. To get around this uncertainty, UAMPS decided to pursue a non-carbon based capacity and energy generation resource at the same price as a carbon based capacity and energy generation resource. Thus, $55/MWh for the CFPP was established (same as natural gas combined cycle generation).

Second, how does a non-carbon based capacity resource with the operating characteristics of the CFPP fit with other future generation resources available to the UAMPS Participants? Renewable generation is the least cost resource option and consequently we firmly believe the UAMPS Participants' portfolios will be comprised of a significant portion of renewables. However, variable energy renewables are currently being supported by a grid that is heavily reliant on fossil-fuel based resources (natural gas and coal). Due to the age of these fossil-based resources and uncertainty on greenhouse gas compliance costs, these resources will be retiring, as stated above. Accordingly, the analysis looks at the right portfolio mix to complement low cost renewables to achieve 100% decarbonization goals for the electric sector—renewables and battery storage or renewables and small modular reactors.

Energy Northwest, the potential operator for the CFPP, recently commissioned a study examining this issue and found a portfolio mix of renewables and small modular reactors to be much more cost effective than renewables and storage (batteries), as illustrated in the chart. It should be noted that the cost of small modular reactors utilized in this study are based on a slightly higher LCOE than the CFPP ($5-10/MWh higher), and these SMR cost estimates are based on the NuScale design as a second deployment that

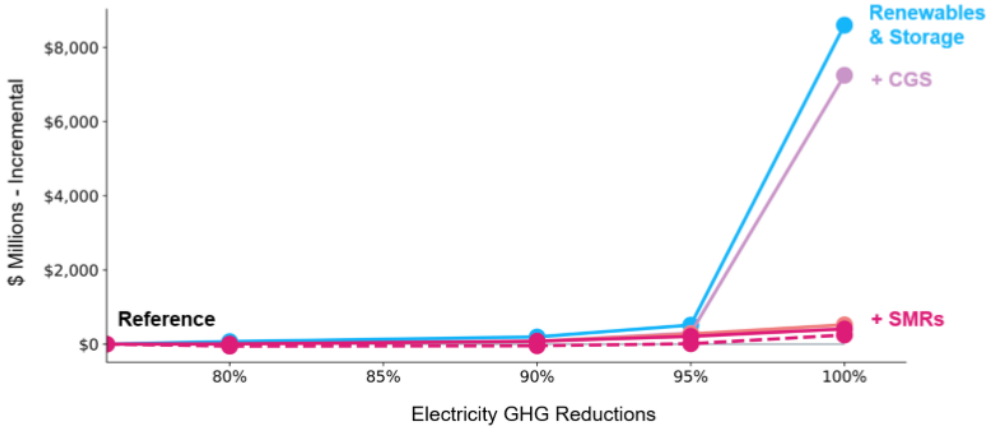


Figure 4: GHG abatement costs. The y-axis represents the incremental cost of each scenario compared to a Reference case that does not apply an emissions constraint.

would not have the benefit of the DOE cost sharing that the CFPP will realize through the New DOE Multi-Year Award.[1]

As a conclusion, based on the above analysis, the CFPP stands as key development option that is worthy of further pursuit by the Participants as decarbonization trends progress within the industry. Even though the CFPP is not fully subscribed, the current CFPP Entitlement Shares warrant further development work while filling up the remaining subscription is aggressively pursued. Current CFPP Entitlement Shares equate to 213 MW of subscription or 29.7% of the 720 MW. Under the current cost-share arrangements (existing DOE 50/50 cost share and NuScale's Cost Contribution) UAMPS has incurred out of pocket costs of approximately $2.3M or 20.5% of the total project costs included to date. UAMPS out of pocket cost is within our current entitlement of the plant. With the New DOE Multi-Year Award, UAMPS anticipates additional parties to subscribe to the CFPP, which will further reduce the existing Participants cost exposure to developing the CFPP.

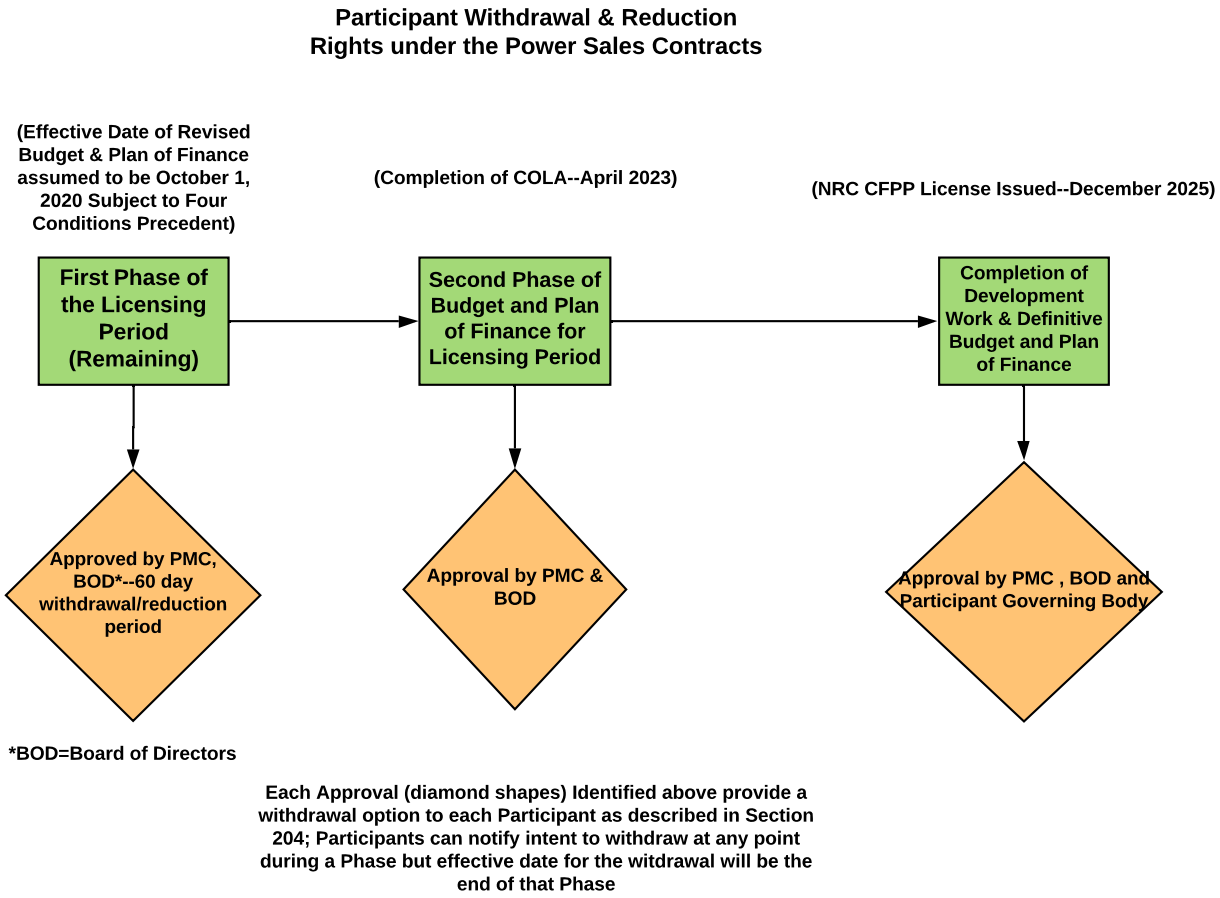
Budget & Plan of Finance

The Budget and Plan of Finance (BPF) required pursuant to Section 601 of the PSC and includes the estimated CFPP costs, milestones to complete Development Work and Construction and a conceptual structure to finance these costs. These costs are to be identified in three time periods; the first phase of the Licensing Period (preparation of COLA & site-specific work), the second phase of the Licensing Period (NRC review of COLA & site-specific work) and the Construction Period.

Currently, the CFPP is working from the Amended B&PF, dated November 20, 2019, which limits Development Costs to $9,000,000. This spending cap is expected to be depleted by September 30, 2020. Attached is the Revised BPF conditionally adopted by the Project Management Committee on July 15, 2020. It is anticipated that the Project Management Committee will manage further CFPP Development Work under maximum Development Cost allowed for under the Revised BPF by interim budgets adopted by the Project Management Committee.

Note that there is a contractual off-ramp for all Participants at the end of the first phase of the Licensing Period, (April 2023, 1st Quarter 2023). The below figure illustrates the contractual off-ramps provided to the Participants through the Completion of Development for the CFPP.

[1] Executive Summary of the E3 Energy Northwest Study available at: https://www.energy-northwest.com/Documents/E3%20Study%20Executive%20Summary%20final.pdf . The reference to CGS (the purple line) in the above figure identifies the cost of relicensing the Columbia Generating Station, which is owned and operated by Energy Northwest. As shown above, the relicensing of CGS would be cheaper than a renewable plus storage resource mix.



Budget and Plan of Finance Amendment Process

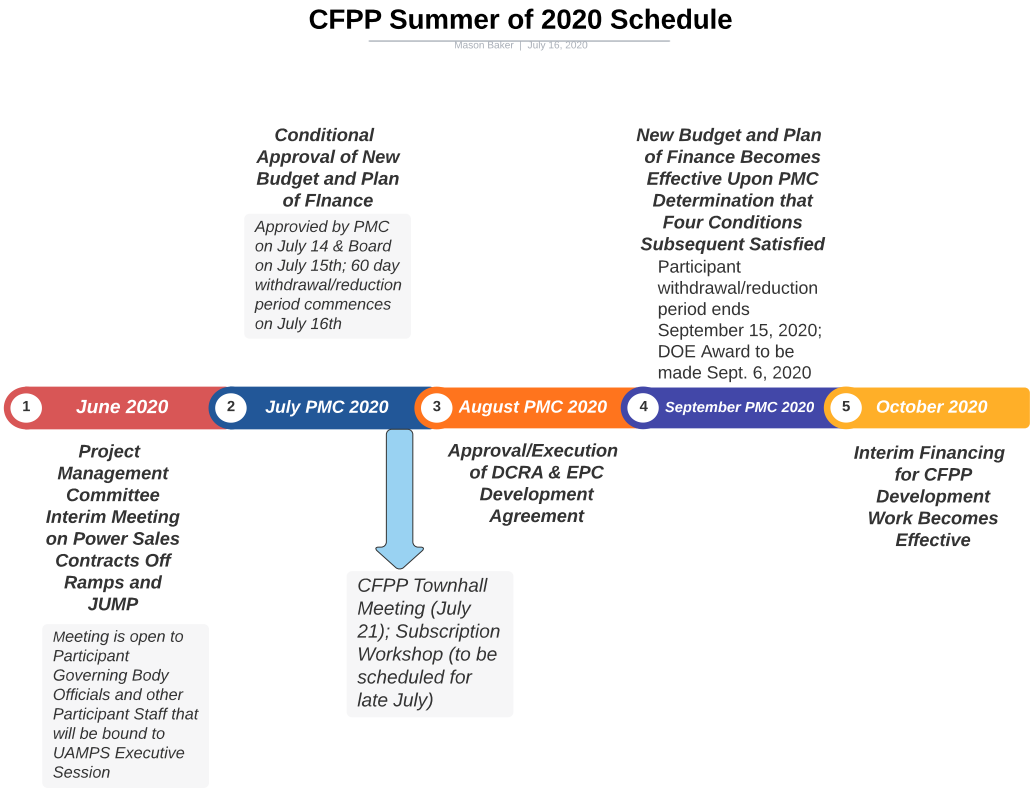
Whenever the BPF is amended each Participant has the option to continue with their current Entitlement Share, increase or decrease their Entitlement Share or completely withdraw from the CFPP. A Participant that withdraws from the CFPP will be responsible for its Entitlement Share, before withdrawal, of Development Costs incurred by UAMPS. Such withdrawing Participant will have twelve (12) months to reimburse UAMPS. Maintaining, increasing or decreasing Entitlement Shares will not require UAMPS reimbursement.

Conclusion

The CFPP is on track to meet the $55/MWh Price Target. The next contractual run of the Economic Competitive Test will occur upon receipt of the Class III cost estimate in late 2021. This

is not a contractual off-ramp for the Participants but is a major decision management point for the Project Management Committee. The total project spend during this time is ~$63M. The New DOE Multi-Year Award and NuScale cost contributions will cover ~$52M. UAMPS will have out of pocket costs of ~$11M. Assuming that Entitlement Shares represent 213 MW or 29.7% of the 720 megawatt project, UAMPS out of pocket of ~$11M represents 17.7% of the project. If the ECT for Class III fails, then the current language in DCRA requires NuScale to reimburse UAMPS 80% (~$8.8) leaving UAMPS with out of pocket costs of ~$2.2M.

UAMPS' approach to the CFPP is carefully phased, with each phase further de-risking the project. A decision to continue participation in the project, given the limited amount of risk to this point, will take UAMPS to the next phase of the project. The CFPP will be further de-risked as the NuScale reactor module is certified by the Nuclear Regulatory Commission, engineering and other costs are further refined, and funding from the New DOE Multi-Year Award starts to flow. In later phases, when larger financial commitments are required, the project will have been substantially de-risked. The below figure outlines the summer CFPP schedule of events leading to an effective Revised Budget and Plan of Finance.



ATTACHMENT B